TECHNICAL DATA SHEET EP1199 Clear

03/26/2009

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022
262-502-6610 FAX 262-502-4743

DESCRIPTION:

Resinlab™ EP1199 Clear is a two part unfilled epoxy adhesive designed for bonding of metals, ceramics and most plastics. This product gives good resistance to water, salt spray, inorganic acids and bases and most organic solvents. This product gives better water and temperature resistance than standard 5 minute epoxy.

It was especially formulated to a 1:1 mix ratio for use in either MMD equipment or side by side dual cartridges for easy dispensing. A handling cure is normally achieved at room temperature within 30 - 60 minutes with full cure in 24 hours. An elevated temperature cure schedule can be used to reach final properties quickly.

TYPICAL PROPERTIES:

All properties given are at 25°C unless otherwise noted.

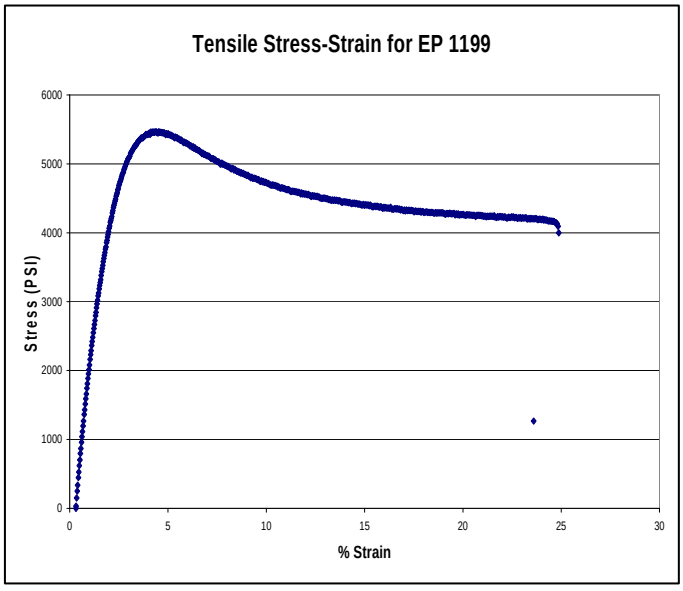
PROPERTY:		VALUE:	TEST METHOD:
Color		Clear	
Viscosity			TM R050-12
RVT, #5, 2.5 RPM	Part A	15,000 cps (mPa·s)	
RVT, #4, 2.5 RPM	Part B	3,000 cps (mPa·s)	
	Mixed	9,000 cps (mPa·s)	
Specific Gravity	Part A	1.16	TM R050-16
	Part B	0.97	
	Mixed	1.06	
Pot Life		8-12 min.	TM R050-19
Mass		50 grams	
Hardness		80	TM R050-17
Scale		Shore-D	
Water Absorption 24 hours		0.28 %	TM R050-35
Temperature Range**		-40 to 150°C	

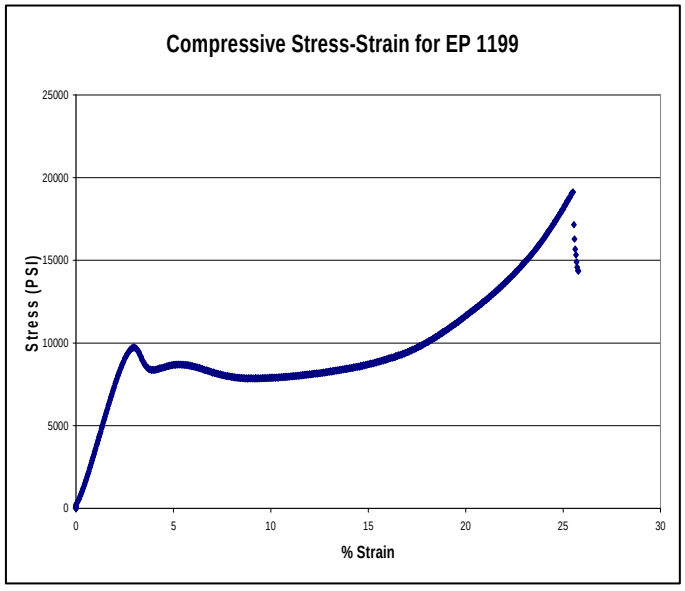
TECHNICAL DATA SHEET EP1199 Clear

03/26/2009

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022
262-502-6610 FAX 262-502-4743

PROPERTY:	VALUE:		TEST METHOD:
Tensile	**PSI**	**N/mm^2**	TM R050-36
Yield Strength	3,500	24.1	
Ultimate Strength	5,500	37.9	
Break Strength	4,000	27.6	
Elongation At Break	10-20 %		
Modulus	320,000	2,070	
Lap Shear Strength (2024 T3 Al Abraded / MEK Wipe)	1,500	10.3	TM R050-37
T-Peel	3 – 5 pli *		
Compressive			TM R050-38
Yield Strength	9,500	65.5	
Ultimate Strength	20,000	137.9	
Break Strength	20,000	137.9	
Modulus	400,000	2,760	



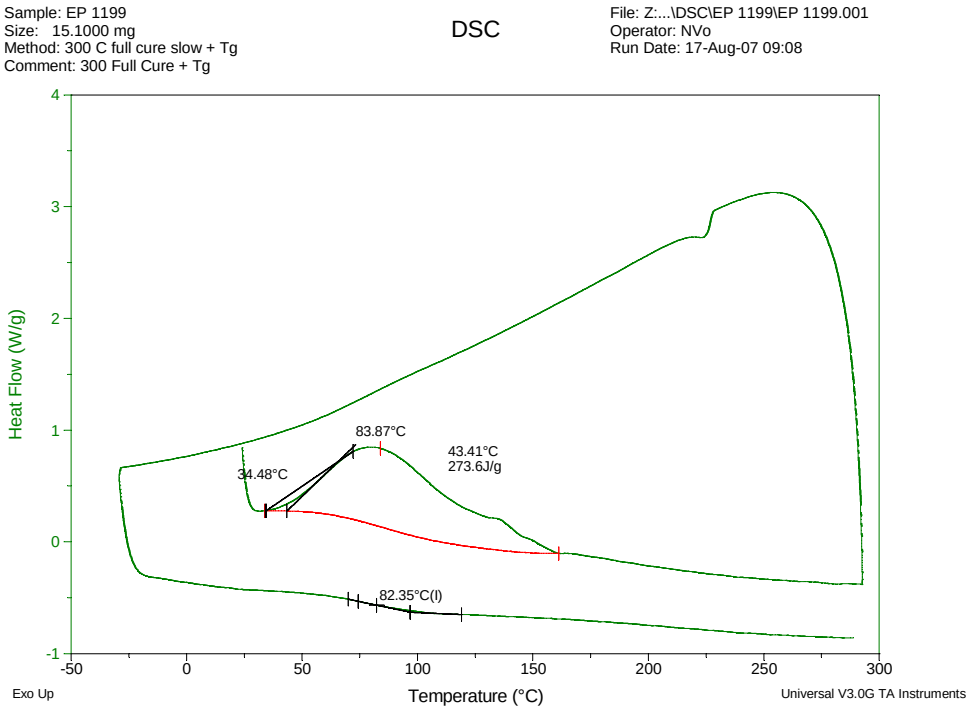


TECHNICAL DATA SHEET EP1199 Clear

03/26/2009

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022
262-502-6610 FAX 262-502-4743

PROPERTY:	VALUE:	TEST METHOD:
Linear Coefficient of Thermal Expansion	50 x ppm/°C *	
Dielectric Constant (25°C, 100Hz)	3.0 *	
Dielectric Strength	420 V/mil * 16.5 kV/mm *	
Volume Resistivity	10 x 10^{14} ohm-cm *	
Glass Transition Temp Exothermic Energy Onset Temp (by DSC)	82°C 273.6 J/g 34°C	TM R050-25



TECHNICAL DATA SHEET EP1199 Clear

03/26/2009

W186 N11687 MORSE DRIVE GERMANTOWN, WI 53022
262-502-6610 FAX 262-502-4743

INSTRUCTIONS:

1) Bring both components to room temperature prior to mixing. Mix 1 parts A to 1 part B thoroughly.

2) Allow to cure undisturbed until product is fully gelled or tack-free to the touch.

3) Clean up uncured resin with suitable organic solvent such as MEK, acetone or a chlorinated.solvent.

SIDE - BY - SIDE CARTRIDGE SUITABILITY RATING

POOR FAIR AVERAGE GOOD EXCELLENT

This rating scale is a general guideline to give the user an expected level of success in a typical bench-top dispensing scenario.

Important process variables to consider are: Cartridge type and size, wall thickness; manual or pneumatic gun type; static mixer design and dimensions; product viscosity spread and ratio; shot size, shot frequency, flow rate; temperature range during use.

This scale also address's product stability in a cartridge. Factors such as filler content and settling rate, storage temperature and cartridge orientation are important factors which affect this.

It is important for the user to define the optimum static mix for each dispensing process, a change in any of the above variables can affect the mix quality. Dispensing the product on a flat surface using the dispensing pattern can help show the quality of mixing in terms of thoroughness and lead/lag consistency.

MIX RATIO:	Part A to B	
	by weight	100 to 85
	by volume	1 to 1

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

** Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

Notes:
Values presented above are considered to be typical properties, not to be used for specification purposes. Contact our Technical Department for further information.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). In extreme cases it may appear solid and cured. Fluctuating temperatures (within 0 to 50°C) aggravate this phenomena. Heating to 50 to 60°C with stirring can usually restore products. Storage at 25 +/- 5°C is optimum for most products.

SHELF LIFE: 12 months